7 April 2003
Application No. 10/064,081
Docket: 1069.co

b.) Amendments to the Claims

1. (currently amended) An optical component comprising:
an optical element;
a bench-attach surface that is used to connect the optical component to an optical bench; and
a bonder chuck engagement surface to which a bonder chuck attaches to manipulate the optical component for solder attachment to the bench.

2. (original) An optical component as claimed in claim 1, wherein the optical component further comprises a mounting structure, the optical element being attached to the mounting structure.

3. (original) An optical component as claimed in claim 2, wherein the optical component is plastically deformable to enable alignment of the optical element after attachment to the optical bench.

4. (original) An optical component as claimed in claim 2, wherein the mounting structure further comprises optical element interface on which the optical element in attached.

5. (original) An optical component as claimed in claim 1, further comprising two bonder chuck engagement surfaces on either lateral side of the optical element.

6. (original) An optical component as claimed in claim 1, wherein the bonder chuck engagement surface is on a top surface of a foot portion, which has the bench-attach surface on a bottom surface.

7. (original) An optical component as claimed in claim 1, wherein the optical component further comprises a mounting structure that comprises a base, an optical element interface, and at least one armature, extending between the base

and the interface, and the bonder chuck engagement surface being on wing portion of the armature.

8. (currently amended) An optical component manipulation system, comprising:

an optical component comprising: an optical element, a bench-attach surface that is used to connect the optical component to an optical bench, and a bonder chuck engagement surface to which a bonder chuck attaches to manipulate the optical component; and

a bonder comprising a chuck that engages the optical component at the bonder chuck engagement surface to place and solder bond the optical component on the optical bench.

9. (original) An optical component manipulation system as claimed in claim 8, wherein the bonder further comprises a chuck heating system to facilitate solder bonding of the optical component to the optical bench.

10. (original) An optical component manipulation system as claimed in claim 8, wherein the optical component further comprises a mounting structure.

11. (original) An optical component manipulation system as claimed in claim 10, wherein the mounting structure is plastically deformable to enable alignment of the optical element after attachment to the optical bench.

12. (original) An optical component manipulation system as claimed in claim 10, wherein the mounting structure further comprises optical element interface on which the optical element is attached.

13. (original) An optical component manipulation system claimed in claim 8, further comprising two bonder chuck engagement surfaces on either lateral side of the optical element.

Rule 1.126

14. (cancelled) ~~An optical component manipulation system as claimed in claim 8, wherein the bonder chuck engagement surface is on a top surface of a foot portion, which has the bench attach surface on a bottom surface.~~

15 ~~14.~~ (original) An optical component manipulation system as claimed in claim 8, wherein the optical component further comprises a mounting structure that comprises a base, an optical element interface, and at least one armature, extending between the base and the interface, and the bonder chuck engagement surface is on wing portion of the armature.

16 ~~15.~~ (currently amended) An optical component installation process, comprising:

picking an optical component with a chuck of a bonder at an engagement surface;

placing the optical component into engagement with an optical bench; and

activating a chuck heater to initiate a solder bonding operation between the optical component and the optical bench.